

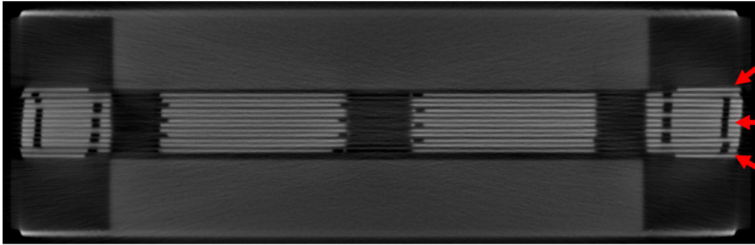
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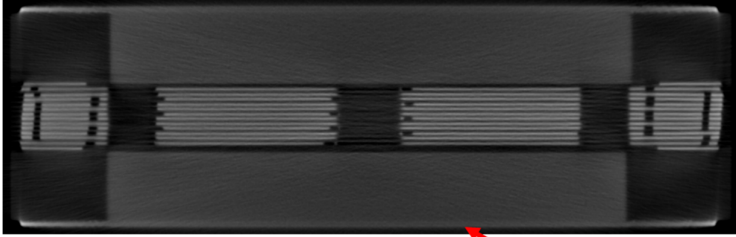
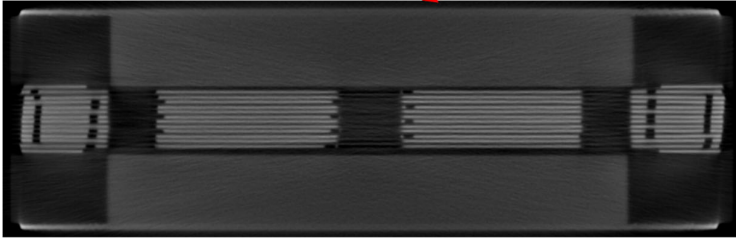
''''GZJ KDKV'4''

**Infringement of Exemplary Claim 1 of U.S. Patent No. 9,819,263 (the '263 patent)**

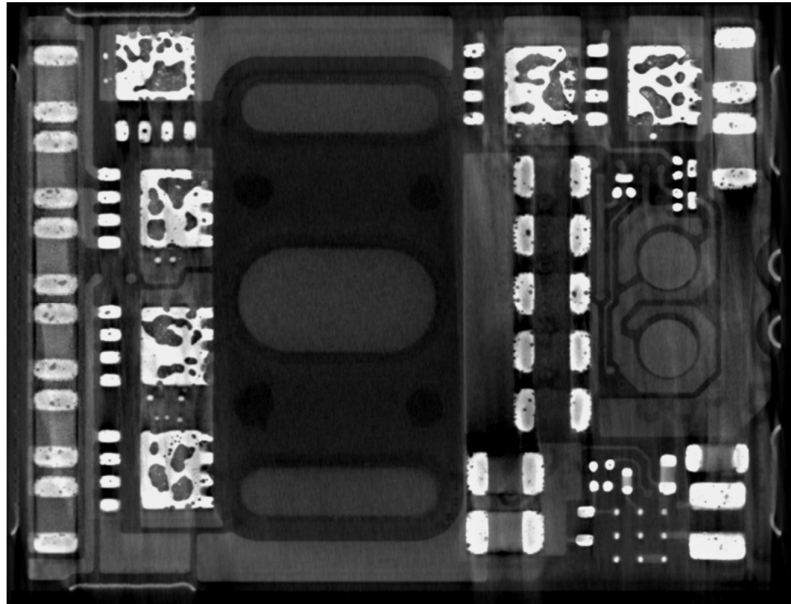
The accused products include, but are not limited to, Vicor's power module products, which include but are not limited to at least the following models: NBM2317S60E1560T0R, NBM2317S60D1565T0R, NBM2317S60D1580T0R, DCM3717S60E14G5TN0, PRM2313S60E54H0T00, VTM2308S60Z1513T00, and VTM2308S60Z0825T00, and Vicor's SM-ChiPs. (*See generally* Davies, Attributes of high-performance power module packaging, Vicor White Paper) (describing SM-CHiPs).) A chart of exemplary claim 1 against exemplary NBM2317S60D1580T0R is provided below.

Annotations and identification of elements in this chart are preliminary, are not final, nor are they intended to limit Plaintiff's identification of claim elements in Vicor's infringing products. Furthermore, NBM2317S60D1580T0R and claim 1 have been provided as representative, and Plaintiff reserves the right to identify additional products and claims, and identify further representative products. Plaintiff reserves the right to amend, supplement, expand, modify, or narrow its identifications in the accused products as it develops facts during discovery, based on the Court's claim constructions, or for any other allowable purpose in this action.

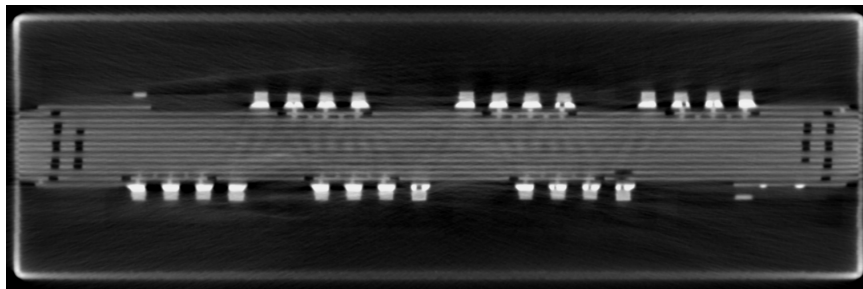
9,819,263	NBM2317S60D1580T0R
1. A power converter, comprising:	<p>The NBM2317S60D1580T0R provides a power converter.</p> <p><b>Product Description</b></p> <p>The NBM2317S60D1580T0R is a high-efficiency Non-Isolated Bus Converter operating from a 40 to 60V<sub>DC</sub> high-side voltage bus to deliver a ratiometric low-side voltage from 10 to 15V<sub>DC</sub>.</p> <p>(NBM2317S60D1580T0R Datasheet at 1.)</p>
a carrier, comprising: an upper surface; and a lower surface;	<p>The NBM2317S60D1580T0R provides a carrier comprising an upper surface and a lower surface.</p>  <p>Upper surface</p> <p>Carrier</p> <p>Lower surface</p>
a first electronic component disposed at the lower surface of the carrier;	The NBM2317S60D1580T0R provides a first electronic component disposed at the lower surface of the carrier.

	 <p data-bbox="1150 505 1497 532"><b>First electronic component</b></p>
<p data-bbox="191 581 537 743">a second electronic component disposed at the upper surface of the carrier; and</p>	<p data-bbox="562 581 1913 654">The NBM2317S60D1580T0R provides a second electronic component disposed at the upper surface of the carrier.</p> <p data-bbox="1150 740 1539 768"><b>Second electronic component</b></p> 
<p data-bbox="191 1122 537 1369">a first connection part, comprising: a first terminal electrically coupled to the upper surface or the lower surface of the carrier; and</p>	<p data-bbox="562 1122 1913 1195">The NBM2317S60D1580T0R provides a first connection part comprising a first terminal electrically coupled to the upper surface or the lower surface of the carrier.</p> <p data-bbox="562 1252 1913 1284">The NBM2317S60D1580T0R has a first terminal coupled to the upper surface or the lower surface of the carrier.</p> <p data-bbox="562 1341 1913 1373">Below is an overhead view of the NBM2317S60D1580T0R showing an upper surface of the carrier having</p>

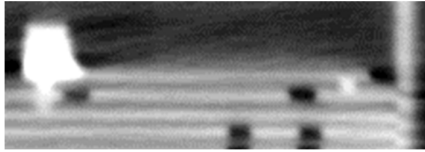
MOSFET connections (which are connected to the first terminal).



Below is a cross-sectional of the carrier showing the MOSFET terminals.



Below demonstrates the MOSFET terminals being connected to the claimed first terminal through vias.



The first terminal provides a PGND which is a common ground terminal for the NBM2317S60D1580T0R which is connected to the upper or lower surface of the carrier.



**First terminal**

a second terminal attached to a surface of the first electronic component apart from the carrier, wherein the second terminal of the first connection part is a bonding pad;

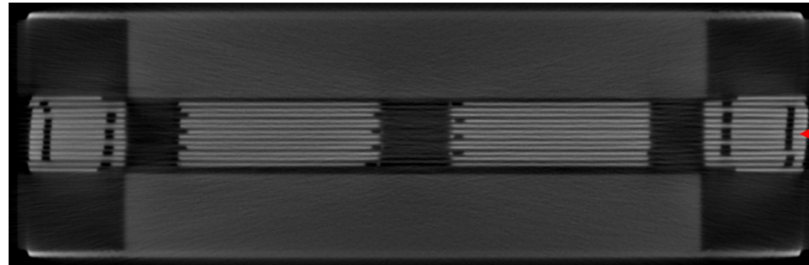
The NBM2317S60D1580T0R provides a second terminal attached to a surface of the first electronic component apart from the carrier, wherein the second terminal of the first connection part is a bonding pad.



**second terminal**

wherein the carrier is disposed at  $\frac{1}{3}$  to  $\frac{2}{3}$  of a height of the power converter, and wherein the first connection part is fabricated by mechanical support of the first electronic component.

The NBM2317S60D1580T0R provides the carrier is disposed at  $\frac{1}{3}$  to  $\frac{2}{3}$  of a height of the power converter.



**Carrier at 1/3 to 2/3 of height**

The NBM2317S60D1580T0R provides that the first connection part is fabricated by mechanical support of the first electronic component.

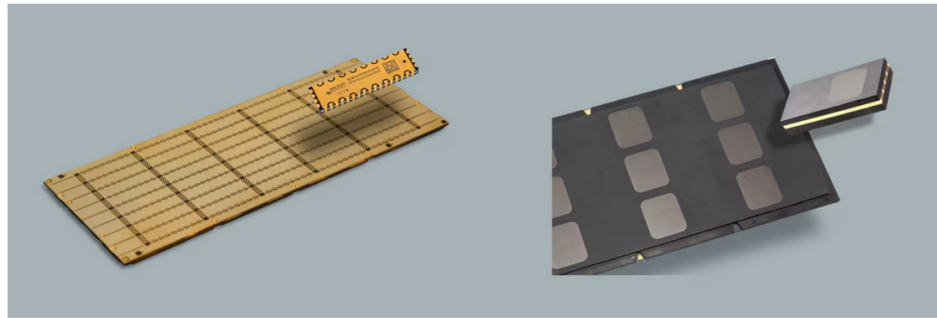


Figure 4: The new panel manufacturing process was another innovation for the power industry. ChiPs are all cut from the same size panel, enabling an automated high-volume manufacturing process.

(Curatolo, Innovating Power Module Packaging at FIG. 4, available at <https://www.vicorpower.com/resource-library/articles/innovating-power-module-packaging>)